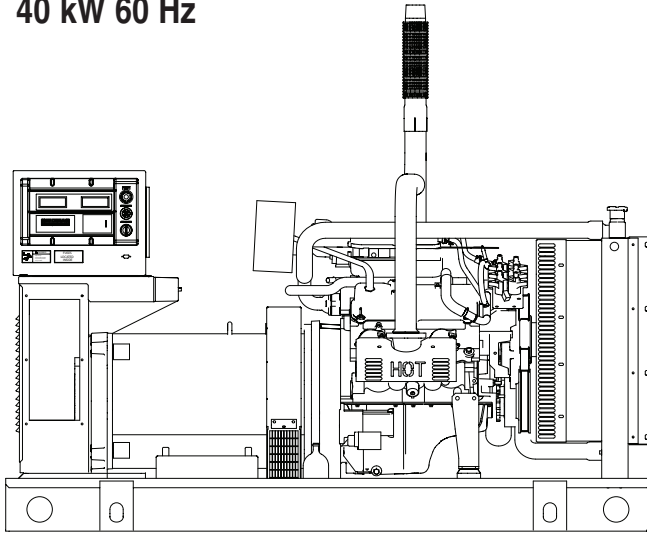


# SG040

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
40 kW 60 Hz



### GENERAC 4.2L ENGINE

Naturally Aspirated  
Gaseous Fueled  
Meets EPA Emission Regulations

## STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line

## FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with H100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

# GENERAC®

# APPLICATION & ENGINEERING DATA

SG040

## GENERATOR SPECIFICATIONS

TYPE .....	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<5%
TELEPHONE INTERFERENCE FACTOR (TIF) .....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE .....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Flexible Disc
LOAD CAPACITY (STANDBY RATING).....	100%
EXCITATION SYSTEM.....	Direct

**NOTE: Emergency loading in compliance with NFPA 99, NFPA 110. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.**

## VOLTAGE REGULATOR

TYPE .....	Full Digital
SENSING .....	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

## GENERATOR FEATURES

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All prototype models have passed three phase short circuit testing

## CONTROL PANEL FEATURES

- TWO FOUR LINE LCD DISPLAYS READ:
  - Voltage (all phases)
  - Power factor
  - kVAR
  - Engine speed
  - Run hours
  - Fault history
  - Coolant temperature
  - Low oil pressure shutdown
  - Overvoltage
  - Low coolant level
  - Not in auto position (flashing light)
  - ATS selection
  - Current (all phases)
  - kW
  - Transfer switch status
  - Low fuel pressure
  - Service reminders
  - Oil pressure
  - Time and date
  - High coolant temperature shutdown
  - Overspeed
  - Low coolant level
  - Exercise speed
- INTERNAL FUNCTIONS:
  - I<sup>2</sup>T function for alternator protection from line to neutral and line to line short circuits
  - Emergency stop
  - Programmable auto crank function
  - 2 wire start for any transfer switch
  - Communicates with the Generac HTS transfer switch
  - Built-in 7 day exerciser
  - Adjustable engine speed at exerciser
  - RS232 port for GenLink® control
  - RS485 port remote communication
  - Canbus addressable
  - Governor controller and voltage regulator are built into the master control board
  - Temperature range -40 °C to 70 °C

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL.....	V6
CYLINDERS.....	6
DISPLACEMENT.....	4.2 Liter
BORE (inches) .....	3.81
STROKE (inches).....	3.74
COMPRESSION RATIO.....	9.3:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS (Int. & Exh.) .....	Precision ground and hardened
LIFTER TYPE.....	Roller, Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE .....	Electronic
FREQUENCY REGULATION.....	Isochronous
STEADY STATE REGULATION.....	± 0.25
ADJUSTMENTS FOR:	
Speed .....	Yes
Droop.....	Yes

## ENGINE LUBRICATION SYSTEM

OIL PUMP .....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	6 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Pressurized Closed
WATER PUMP FLOW .....	10.8 gal/min
FAN SPEED .....	1050
FAN DIAMETER.....	22 inches
FAN MODE.....	Puller

## FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID .....	Standard
OPERATING FUEL PRESSURE.....	5" - 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER .....	2 Amp
RECOMMENDED BATTERY .....	Group 26, 525CCA
SYSTEM VOLTAGE.....	12 Volts

## OPERATING DATA

<b>SG040</b>			
<b>KW RATING</b>	40		
<b>ENGINE SIZE</b>	4.2 Liter		
<b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>	<b>KW</b>	<b>AMP</b>	<b>CB Size</b>
120/240V, 1-phase, 1.0 pf	40	167	200
120/240V, 3-phase, 0.8 pf	40	120	150
120/208V, 3-phase, 0.8 pf	40	139	150
277/480V, 3-phase, 0.8 pf	40	60	70
<b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b>			
Single phase or 208 3-phase	71		
480V 3-phase	95		
<b>ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)</b>	<b>Natural Gas</b>	<b>Propane</b>	
	(ft <sup>3</sup> /hr.)	(gal/hr.)	cu ft/hr
25% of rated load	160	1.7	61.8
50% of rated load	305	3.3	119
75% of rated load	445	4.7	170
100% of rated load*	610	6.5	235
<b>ENGINE COOLING</b>			
Air flow (inlet air including alternator and combustion air)	ft <sup>3</sup> /min.	2,460	
System coolant capacity	US gal.	3.0	
Heat rejection to coolant	BTU/hr.	142,600	
Max. operating air temp. on radiator	°C (°F)	60 (150)	
Max. ambient temperature	°C (°F)	50 (140)	
<b>COMBUSTION AIR REQUIREMENTS</b>			
Flow at rated power 60 Hz	cfm	115	
<b>EXHAUST</b>			
Exhaust flow at rated output 60 Hz	cfm	350	
Exhaust temp. at muffler outlet	°F	900	
Maximum recommended back pressure	kPa ("Hg)	10 (2.9")	
<b>ENGINE PARAMETERS</b>			
Rated synchronous RPM	60 Hz	1800	
HP at rated KW**	60 Hz	62	
<b>POWER ADJUSTMENT FOR AMBIENT CONDITIONS</b>			
Temperature Deration			
3% for every 10 °C above - °C	40		
1.65% for every 10 °F above - °F	104		
Altitude Deration			
1% for every 100 m above - m	915		
3% for every 1000 ft. above - ft.	3000		

\* Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

\*\* Refer to "Emissions Data Sheets" for maximum bHP for EPA and SCAQMD permitting purposes.

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice. KW rating is based on LPG Fuel and may derate with natural gas.

# STANDARD ENGINE & SAFETY FEATURES

SG040

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Radiator Duct Adapter
- Fuel Lockoff Solenoid
- Secondary Fuel Regulator (N.G. and L.P.)
- Battery Charge Alternator
- Battery Cables
- Battery Box
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Isochronous Governor
- Engine Block Heater
- Gas Detector
- H100 Control Panel
- 8-Function Relay Board

## ■ FUEL ACCESSORIES

- Flexible Fuel Lines
- L.P. Liquid Withdrawal
- Automatic Gaseous Dual Fuel

## ■ ELECTRICAL ACCESSORIES

- Battery, 12 Volt, 90 A.H., 27F
- 10A Dual Rate Battery Charger

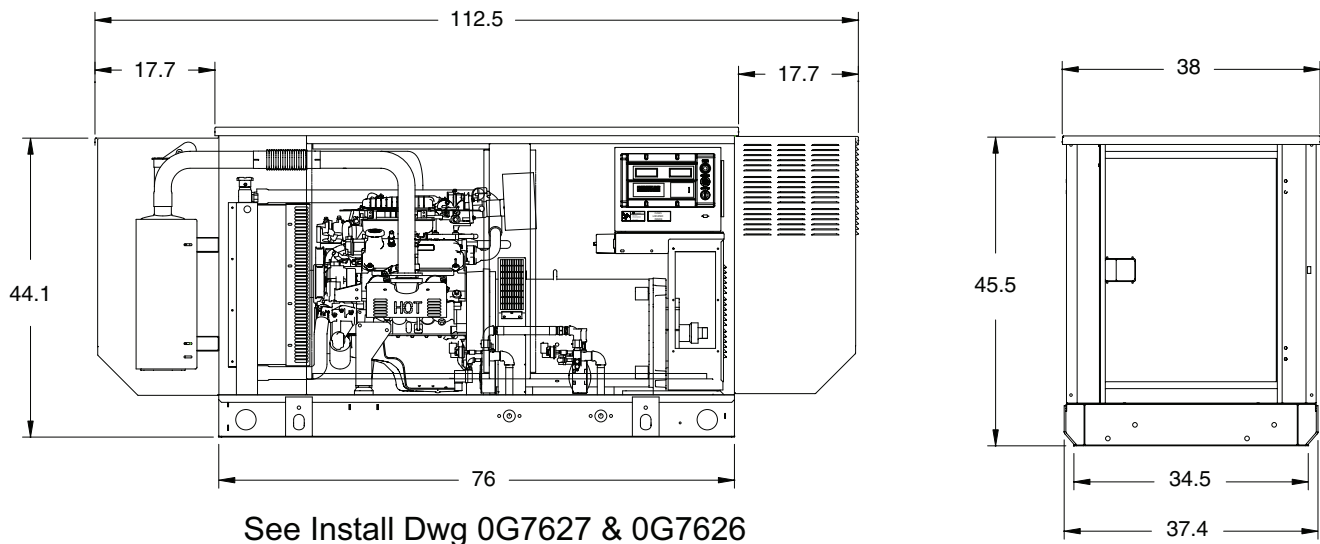
## ■ ALTERNATOR ACCESSORIES

- Alternator Upsizing to 60 kW
- Main Line Circuit Breaker

## ■ ENCLOSURES

- Aluminum Enclosure
- Enclosed Muffler

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



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